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**References are to Findings for Incinerators 440 and 441**
**Clean Air Act (CAA) Potential Areas of Noncompliance (AON) and Areas of Concern (AOC)**
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| 1 | 19 | Incinerators 440/441 | RFAAP did not remain in compliance with the DRE standard because it did not comply with the operating limits standards on an hourly rolling average for the minimum combustion chamber temperature (kiln and afterburner) and the maximum flue gas flow rate.<br><br>[*Refer to list of events on Pages 19-27*] | As a general response, it is noted that BAE Systems is not responsible for any operations prior to 1 July 2012. As such, only findings related to events from 1 July 2012 through 31 December 2013 are addressed in this response.<br><br><u>Minimum Kiln Combustion Chamber Temperature</u><br><br>EPA identified nineteen (19) instances for the kiln on Incinerator 440. For these 19 instances, the following observations were made:<br><br>• Three (3) of the low temperature periods occurred during a malfunction (7/03/2012 at 19:29 hrs; 11/29/2012 at 06:15 hrs and 20:36 hrs; 5/17/2013 at 14:23 hrs). Each of these limit exceedances were reported on the corresponding semiannual report for the incinerator. As per 40 CFR § 63.1206(b)(1)(i), the operating parameter limits for the incinerator do not apply during malfunctions.<br>• Eleven (11) of the low temperature periods occurred when there was no waste feed in the system (7/12/2012 at 15:14 hrs; 10/01/2012 at 10:59 hrs; 3/29/2013 at 13:55 hrs; 4/30/2013 at 14:25 hrs; 5/03/2013 at 10:04 hrs and 15:06 hrs; 5/24/2013 at 10:46 hrs and 11:34 hrs; 05/31/2013 at 15:48 hrs; 7/02/2013 at 18:00 hrs; 7/30/2013 at 17:23 hrs; 7/31/2013 at 11:46 hrs; 11/21/2013 at 12:17 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining five (5) of the findings appear to be due to an error in EPA's data query or hourly rolling average calculation |

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| | | | | (7/04/2012 at 01:12 hrs and 04:25 hrs; 7/13/2012 at 00:17 hrs; 10/15/2012 at 13:33 hrs; 4/04/2013 at 12:41 hrs; 11/21/2013 at 12:17 hrs). A review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had temperatures below the limit. BAE was unable to identify the source of EPA's reported temperature data for the time period.<br><br>EPA identified seventeen (17) instances for the kiln on Incinerator 441. For these 17 instances, the following observations were made:<br><br>• Twelve (12) of the low temperature periods occurred when there was no waste feed in the system (8/24/2012 at 13:49 hrs; 11/01/2012 at 14:17 hrs; 11/28/2012 at 15:22 hrs; 12/19/2012 at 10:12 hrs; 1/30/2013 at 11:36 hrs; 4/26/2013 at 09:07 hrs; 8/01/2013 at 15:22 hrs; 8/31/2013 at 03:39 hrs; 10/04/2013 at 13:38 hrs; 11/13/2013 at 17:28 hrs; 11/29/2013 at 15:04 hrs; 12/10/2013 at 08:30 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining five (5) of the periods appear to be due to an error in EPA's data query or hourly rolling average calculation (8/26/2012 at 01:11 hrs; 11/26/2012 at 12:10 hrs; 12/04/2012 at 10:14 hrs; 2/12/2013 at 00:45 hrs and 04:16 hrs; 4/27/2013 at 09:07 hrs). A review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had temperatures below the limit. Furthermore, we were unable to identify the source of EPA's reported temperature data |

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| | | | | for the time period.<br><br>Minimum Afterburner Combustion Chamber Temperature<br><br>EPA identified twenty (20) instances for the afterburner on Incinerator 440. For these 20 instances, the following observations were made:<br><br>• Three (3) of the low temperature periods occurred during a malfunction (7/03/2012 at 19:22 hrs; 11/29/2012 at 06:09 hrs and 20:36 hrs; 5/17/2013 at 14:18 hrs). Each of these limit exceedances were reported on the corresponding semiannual report for the incinerator. As per 40 CFR § 63.1206(b)(1)(i), the operating parameter limits for the incinerator do not apply during malfunctions.<br>• Twelve (12) of the low temperature periods occurred when there was no waste feed in the system (7/12/2012 at 15:11 hrs; 10/01/2012 at 10:57 hrs; 10/29/2012 at 14:35 hrs and 16:01 hrs; 3/29/2013 at 13:53 hrs; 4/30/2013 at 14:23 hrs; 5/03/2013 at 10:04 hrs and 15:06 hrs; 5/24/2013 at 10:46 hrs and 11:34 hrs; 5/31/2013 at 15:46 hrs; 7/02/2013 at 18:00 hrs; 7/30/2013 at 17:23 hrs; 7/31/2013 at 11:46 hrs; 11/01/2013 at 11:52 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining five (5) of the periods appear to be due to an error in EPA's data query or hourly rolling average calculation (7/04/2012 at 01:12 hrs and 04:25 hrs; 7/13/2012 at 00:17 hrs; 10/15/2012 at 14:35 hrs and 16:01 hrs; 4/04/2013 at 12:41 hrs; 11/21/2013 at 12:17 hrs). A review of the historical operating |

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| | | | | data and recalculation of rolling averages found that none of the alleged periods had temperatures below the limit. Furthermore, we were unable to identify the source of EPA's reported temperature data for the time period.<br><br>EPA identified twenty-four (24) instances for the afterburner on Incinerator 441. For these these 24 instances, the following observations were made:<br><br>• One (1) of the low temperature periods occurred during a malfunction (7/3/2012 at 19:23 hrs and 22:33 hrs). This exceedance was reported on the corresponding semiannual report for the incinerator. As per 40 CFR § 63.1206(b)(1)(i), the operating parameter limits for the incinerator do not apply during malfunctions.<br>• Seventeen (17) of the low temperature periods occurred when there was no waste feed in the system (8/24/2012 at 13:45 hrs; 11/1/2012 at 14:15 hrs; 11/28/2012 at 15:20 hrs; 12/19/2012 at 10:10 hrs; 1/30/2013 at 11:36 hrs; 2/28/2013 at 15:43 hrs; 3/29/2013 at 14:07 hrs; 4/24/2013 at 14:08 hrs; 4/26/2013 at 11:47 hrs; 6/26/2013 at 11:26 hrs; 7/01/2013 at 18:34 hrs; 8/01/2013 at 15:20 hrs; 8/31/2013 at 03:39 hrs; 10/04/2013 at 13:38 hrs; 11/13/2013 at 17:28 hrs; 11/29/2013 at 15:04 hrs; 12/10/2013 at 08:30 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining six (6) of the periods appear to be due an error in EPA's data query or hourly rolling average calculation |

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| | | | | (8/26/2012 at 01:11 hrs; 11/26/2012 at 12:10 hrs; 12/04/2012 at 10:14 hrs; 2/12/2013 at 00:45 hrs and 04:16 hrs; 4/27/2013 at 09:07 hrs; 7/03/2013 at 20:47 hrs). A secondary review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had temperatures below the limit. Furthermore, we were unable to identify the source of EPA's reported temperature data for the time period.<br><br><u>Maximum Flue Gas Flow Rate</u><br><br>EPA identified one (1) instance for Incinerator 440. In this instance, there was no feed in the system (11/30/2012 at 11:37 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. This instance is documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request. |
| 2 | 27 | Incinerators 440/441 | RFAAP did not remain in compliance with the dioxins and furans emission standard because it did not comply with the operating limits standards on an hourly rolling average for the maximum temperature of the gas at the inlet to the baghouse, minimum combustion chamber temperature in the kiln and afterburner, and the maximum flue gas flow rate.<br><br>[*Refer to list of events on Pages 19-28*] | <u>Maximum Temperature of the Gas at the Inlet to the Baghouse</u><br><br>EPA identified three (3) instances regarding temperature limit at the inlet to the baghouse on Incinerator 440. For these 3 instances, the following observations were made:<br><br>• One (1) of the high temperature periods occurred during a malfunction (11/25/2013 at 05:21 hrs). This limit exceedance was reported on the corresponding semiannual report for the incinerator. As per 40 CFR § 63.1206(b)(1)(i), the operating parameter limits for the incinerator do not apply during malfunctions.<br>• One (1) of the high temperature periods occurred when there was no waste feed in the system (11/01/2013 at 11:51 hrs). Although |

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| | | | | the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. This instance is documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining one (1) period appears to be due to an error in EPA's data query or hourly rolling average calculation (11/21/2013 at 12:17 hrs). A secondary review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had temperatures above the limit. Furthermore, we were unable to identify the source of EPA's reported temperature data for the time period.<br><br>EPA identified two (2) instances regarding maximum temperature limit at the inlet to the baghouse on Incinerator 441. BAE was not able to corroborate EPA's data query for these two events (7/03/2012 at 23:16 hrs; 8/23/2012 at 20:24 hrs). The supposed period of high temperature likely resulted from either an error in EPA's data query or hourly rolling average calculation. A review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had temperatures above the limit. Furthermore, we were unable to identify the source of EPA's reported temperature data for the time period.<br><br><u>Minimum Kiln Combustion Chamber Temperature</u><br><br>See responses to each finding above.<br><br><u>Minimum Afterburner Combustion Chamber Temperature</u><br><br>See responses to each finding above. |

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| | | | | Maximum Flue Gas Flow Rate<br><br>See responses to each finding above. |
| 3 | 28 | Incinerators 440/441 | RFAAP did not remain in compliance with the particulate matter emissions standard because it did not comply with the operating limits standards on an hourly rolling average for the maximum flue gas flow rate. | See responses to each finding above. |
| 4 | 29 | Incinerators 440/441 | RFAAP did not remain in compliance with the semivolatile metals and low volatility metals emission standards because it did not comply with the maximum inlet temperature to the baghouse and maximum flue gas flow rate. | Maximum Temperature of the Gas at the Inlet to the Baghouse<br><br>See responses to each finding above.<br><br>Maximum Flue Gas Flow Rate<br><br>See responses to each finding above. |
| 5 | 30 | Incinerators 440/441 | RFAAP did not remain in compliance with the hydrogen chloride and chlorine emissions standard because it did not comply with the minimum scrubber water flow rate and maximum flue gas flow rate.<br><br>[*Refer to list of events on Pages 30-33*] | Minimum Scrubber Flow Rate<br><br>EPA identified twelve (12) instances with regard to minimum scrubber flow rate on Incinerator 440. For these 12 instances, the following observations were made:<br><br>• Nine (9) of the low flow periods occurred when there was no waste feed in the system (10/01/2012 at 10:58 hrs; 3/29/2013 at 14:10 hrs; 4/30/2013 at 14:41 hrs; 5/03/2013 at 10:04 and 15:06 hrs; 5/31/2013 at 16:02 hrs; 7/02/2013 at 18:00 hrs; 07/30/2013 at 11:46 hrs; 11/1/2013 at 12:07 hrs; 11/21/2013 at 12:17 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are |

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| | | | | documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining three (3) of the periods appear to be due to an error in EPA's data query or hourly rolling average calculation (10/15/2012 at 13:33 hrs; 4/04/2013 at 12:41 hrs; 11/21/2013 at 12:17 hrs). A review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had flow rates below the limit. Furthermore, we were unable to identify the source of EPA's reported flow data for the time period.<br><br>EPA identified twenty (20) instances with regard to minimum scrubber flow rate on Incinerator 441. For these 20 instances, the following observations were made:<br><br>• Fifteen (15) of the low flow periods occurred when there was no waste feed in the system (11/1/2012 at 14:18 hrs; 11/28/2012 at 15:21 hrs; 12/19/2012 at 10:24 hrs; 1/30/2013 at 11:36 hrs; 3/29/2013 at 14:07 hrs; 4/24/2013 at 14:08 hrs; 4/26/2013 at 11:47 hrs; 6/26/2013 at 11:33 hrs; 7/01/2013 at 18:34 hrs; 8/01/2013 at 15:28 hrs; 8/31/2013 at 03:39 hrs; 10/04/2013 at 13:38 hrs; 11/13/2013 at 17:28 hrs; 11/29/2013 at 15:04 hrs; 12/10/2013 at 08:30 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining five (5) of the periods appear to be due to an error |

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| | | | | in EPA's data query or hourly rolling average calculation (11/26/2012 at 12:10 hrs; 12/04/2012 at 10:14 hrs; 2/12/2013 at 00:45 hrs and 04:16 hrs; 2/28/2013 at 15:55 hrs; 7/3/2013 at 20:47 hrs). A secondary review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had flow rates below the limit. Furthermore, we were unable to identify the source of EPA's reported flow data for the time period.<br><br><u>Maximum Flue Gas Flow Rate</u><br><br>See responses to each finding above. |
| A | 33 | Incinerators 440/441 | RFAAP did not exceed the 12-hour RA for mercury; however, it also monitors a minimum flue gas velocity for mercury on an hourly rolling average.<br><br>[*Refer to list of events on Pages 33-35*] | <u>Flue Gas Flow Rate</u><br><br>EPA identified seven (7) instances with respect to minimum flue gas flow rate (velocity) limit on Incinerator 440. For of these 7 instances, the following observations were made:<br><br>• Five (5) of the low flow periods occurred when there was no waste feed in the system (10/01/2012 at 11:25 hrs; 5/31/2013 at 16:10 hrs; 7/02/2013 at 18:00 hrs; 7/30/2013 at 17:23 hrs 11/01/2013 at 12:20 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining two (2) of the periods appear to be due to an error in EPA's data query or hourly rolling average calculation (10/15/2012 at 13:33 hrs; 11/21/2013 at 12:17 hrs). A secondary |

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| | | | | review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had velocities below the limit. Furthermore, we were unable to identify the source of EPA's reported flow data for the time period.<br><br>EPA identified fourteen (14) instances with respect to minimum flue gas flow rate (velocity) limit on Incinerator 441. For these 14 instances, the following observations were made:<br><br>• Eleven (11) of the low flow periods occurred when there was no waste feed in the system (11/28/2012 at 15:41 hrs; 1/30/2013 at 11:39 hrs; 3/29/2013 at 14:10 hrs; 4/24/2013 at 14:08 hrs; 4/26/2013 at 11:47 hrs; 6/26/2013 at 11:55 hrs; 7/01/2013 at 18:34 hrs; 10/04/2013 at 13:38 hrs; 11/13/2013 at 17:28 hrs; 11/29/2013 at 15:04 hrs; 12/10/2013 at 08:30 hrs). Although the slurry feed rate column indicated feed at the time, no waste was present. The apparent feed was either a result of pump maintenance or flow meter calibration. These instances are documented through a combination of operator records, maintenance records, and additional, non-regulatory operating data not included in EPA's review. A copy of the substantiating operating records can be provided upon request.<br>• The remaining three (3) of the periods appear to be due to an error in EPA's data query or hourly rolling average calculation (12/04/2012 at 10:14 hrs; 2/12/2013 at 00:45 hrs; 4/27/2013 at 09:07 hrs). A secondary review of the historical operating data and recalculation of rolling averages found that none of the alleged periods had velocities below the limit. Furthermore, we were unable to identify the source of EPA's reported flow data for the time period. |
| B | 35 | Incinerators 440/441 | Electronic data for incinerators 440 and 441 are recorded in two separate data systems, which | In each identified instance, no waste feed was in the system and the hazardous waste residence time had fully expired prior to shutdown of the |

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| | | | ensure that if one data system is not collecting data, but the control systems are operational, the other data system is collecting data for both incinerators. Despite this redundant system, no operating data was recorded during the following times. It is unclear what caused the missing data.<br><br>[*Refer to list of events on Pages 35-36*] | monitoring system (12/21/2012 at 13:01 hrs; 12:30/2012 at 23:54 hrs; 1/02/2013 at 16:28 hrs; 12/22/2013 at 14:28 hrs). The lack of feed during these downtimes is supported with additional unit operating records not included in EPA's data review. A detailed response for each alleged violation is provided in the attached table. A copy of the substantiating operating records can be provided upon request. |